Crops, Soils and Fertilizers

CONDUCTED BY B. W. KILGORE,
State Chemist North Carolina Department of Agriculture and Director Agricultural Experiment Station.

Inquiries of Progressive Farmer readers cheerfully answered.

DR. FREEMAN'S TALKS.

XVIII.—Grass and Grain Crops.

Messrs. Editors: I wish to say to all your readers, that now is the time for every farmer to prepare for his grain and grass crop.

I don't advise you to put in large crops of grain or grass, but to begin with a small plot and learn something about growing these crops and whether your land is suited to them.

But be sure you do not fall out with the crop you try until you have intelligently tried to make it. It is not always the land, but sometimes the man, that is the cause of the failure.

I passed along the road one day and asked a friend who was just over the fence plowing, what he was doing, and he said he was plowing in some clover seed. This friend was plowing with a turn plow as you would break up land for corn. I asked him if he thought he would get a stand of colver by putting it in that way, and he said, 'o' course," he would. This gentleman was one of the best men in Nash County, and his land adapted to clover, but his failure was not in the land, but in the man.

Now, reader, think over your failures with wheat, oats and the grasses, and see if you did not fail because you did not know just how to do the work.

I have often been to picnics and all the good ladies had cake, but only two or three had the very best cake that could be made out of the several ingredients used. The rest had used many the same thing to make their cakes, but they did not know how to mix the several parts, and how to bake it after it was made. One of [illegible] neighbors says if he were to sow peas on his [illegible]nd it would ruin it so he could not make one [illegible]op of anything on it for three years. Now [illegible]ese cake makers think they know all about [illegible]naking cake, but we know they can't make one [illegible]t for a good-looking person to eat. And so with [illegible]is farmer: he thinks he knows all that any one [illegible]e knows about farming. Now, Mr. Reader, [illegible]u are just like these people I have mentioned. [illegible]u think you know, but you don't, and this is [illegible] cause f your not having one or two acres [illegible] grass and clover, and a few little lots in rye [illegible]r the early milkers.

Now the way to learn is for each neighborhood to have a brain co-operation and what all these brains conclude is the best.

H. F. FREEMAN.

Wilson Co., N. C.

TALKS ON INSECT PESTS.

XV—The Corn-stalk Borer—Destroy It Now.

Messrs. Editors: Every spring we get complaints of young corn stalks being bored into and destroyed by the corn stalk-borer, a whitish caterpillar an inch long, with small black specks on the body.

Like the tobacco flea-beetle which was discussed last week, the time to fight this pest is in the fall of the year and then we fight to protect the next year's crop. The corn stalk-borer passes the winter in the pupa state inside the corn stalks. Sometimes they are to be found as high on the stalks as the ears and again as low as the surface of the ground. In this pupa stage they are quite helpless and any method by which the infested stalk is completely destroyed will destroy the insects also.

One method of dealing with them is to cut the stalk at the ground, as close to the surface as possible, and feed to the cattle. Any stalks that are not eaten should then be put in the compost heap and thoroughly rotted with the manure, or if this is not done they should be burned. If this method of cutting the fodder be followed, the roots and stubs should be plowed out, piled and burned, to destroy those pupae that may be in them.

But if we must persist in the slovenly looking habit of "pulling" our fodder then as soon as the ears are removed let the stalks be pulled up by the roots, and the whole burned. Plow the land and sow a winter crop.

The point at issue is to absolutely destroy all the lower half of the stalk from the ear to below the ground so that the insects which are there shall not mature.

Work against this insect can only be carried on to best advantage when all, or nearly all, of the farmers in the community agree to follow the same plan. Otherwise the moths maturing on one neglected farm may supply stalk-borers for an entire community.

One of the principal points to be emphasized is that by simply changing our habit of harvesting—that is by cutting at the ground instead of pulling, we will to a considerable degree check the ravages of this pest. The habit of pulling fodder is wasteful of the fodder, slovenly in appearance, and gives excellent opportunity for the increase of insect pests. How many chinch bugs do you suppose pass the winter among such old stalks?

FRANKLIN SHERMAN, JR.

Growing Small Grain Successfully.

Small grain means full barns, good flour, excellent stock feed, pea vine hay, land gradually getting better, more cattle and hogs, better homes and better conditions every way. It is the salvation of all farmers on the northern belt of our cotton lands. Without small grain there can be no systematic rotation of crops and without a wise rotation there can be no improvement of lands. In this Piedmont belt from Danville down the Southern Road to Atlanta oats should be planted in October and on up to December. The earlier they are sown the better. Fall sown oats are always sure to make a fair yield; the spring sowing is always doubtful. The proper time to sow wheat is October 15 to November 20, but often very fine wheat is made when sown late in December.

There is more in the preparation of the land than in the amount of fertilizer used. Fully three inches of the hard pan or clay should be broken. That should be done each year until the soil is eight to twelve inches deep. That deepening process cannot go on successfully without the addition of humus, which must come from small grain and pea vines. The land being thus prepared, after thorough harrowing it will be ready for the seed. Oats in this climate should always be put in with the oat drill to insure a stand in hard winters. It is a slow way, but a very sure one. We saw the Appler oat, which is an improved Red Rust Proof, put in with a drill the middle of last November. Winter set in before they came up. The ground was so cold they did not get up till late in January. Then the spring was so dry that they did not get more than twenty-four inches high. They stood the cold and drought and made fifteen bushels to the acre on very poor land. If a farmer wants oats let him sow the Red Rust Proof or the Appler; if good forage with a light yield of grain, let him sow the late tall varieties. We find oats more profitable than straw. When it comes to wheat after the land is thoroughly prepared the easiest way to put in the seed is with a good drill which will distribute the fertilizer. There are hundreds of small farmers that cannot afford to buy a drill for a few acres of wheat and it is often inconvenient to hire one. Let them scatter the fertilizer by hand and sow the seed the same way, and put in with a cutaway harrow, or a double foot plow with two short shovels on the stock. The yield will be as good as if put in with a drill.

CHARLES PETTY.

Spartanburg Co., S. C.

How I Built Up Some Poor Farms.

Messrs. Editors: If having been the owner of poor land fits a man to write about poor land, and if he is competent in proportion to the poverty of the land, then I think I am the most competent man in North Carolina to discourse about poor land. Some years ago I bought some so poor that the ownership carried a distinct species of disgrace along with it. For time out of mind owners (and since the war successive tenants) had skinned that land or tried to, for generally the land did the skinning, the tenants being poorer at harvest than at seed time.

This land lay convenient to me. It was free from rocks, hills and waste places. It was light and indeed somewhat given to sandiness and therefore pleasant to cultivate. I bought it, giving the owner considerable less than one-half the price he paid for it a few years previously, and set to work to make it productive.

I did not intend for that land to break me as it was said to have served its former owners. Therefore I sought to proceed upon economical lines. Aware that of the three elements of fertility, ammonia, potash and phosphoric acid, that amonia is both the most costly and the easiest to escape the soil, I decided to buy as little ammonia as possible, especially as it costs about three times as much as the other properties per pound. Of course I had to have ammonia, but I knew that I could get it without buying it at so much per ton. In fact, get it free, as the process by which I got it, as will appear, did not cost me anything extra to get the ammonia added. Potash and phophoric acid I also needed largely. These I had to buy because there was no other way to get them into the soil.

The land was plowed and run off, in rows three feet apart. In these rows I sowed a mixture of 150 pounds of kainit and 100 pounds of acid phosphate per acre. Listing on this furorw by a furrow from each side I then split open the list and also threw open the furrow for the peas. In this furrow I sowed evenly early in June cow peas at the rate of one bushel to the acre and covered them lightly with a small tooth cultivator. During the summer, as needed, they were given three plowings with a small tooth cultivator, no hoe work being required.

The result was a fair crop of cowpeas and pea vines. The peas I picked as soon as ripe and cut the vines for forage.

In September I plowed under the stubble and applied broad cast the same quantity and the same kind of fertilizer used for the peas. This I harrowed in with a disk harrow, leaving a perfect seed bed. On this I sowed annual (crimson) clover at the rate of three gallons to the acre and dragged it in with a brush.

The following spring the clover yielded a moderate crop of forage, the land being yet too poor to raise clover with much success.

In June I plowed under the crimson clover stubble and again drilled in peas, using the same fertilizer and the same mode of culture as the preceeding year. The autumn showed how my land was improving. The crop of both peas and pea vines was good, I might almost say excellent.

In September the pea stubble was plowed under and crimson clover again sown, the treatment being the same as that of the fall before. The next spring gave a very good crop of clover hay, indeed. This I again followed with peas, the cultivation and manuring being the same as for the two former crops. The crop of peas and forage that came that summer was a wonder. Its equal had never been seen in this neighborhood.

I now found that this pauper farm had been transformed into a very good one indeed, worth many times what I paid for it. That fall I turned under the pea stubble and put the land in strawberries, my staple crop. Since then I have grown as fine berries and as fine crops of all kinds on that land as anybody has grown in the county. Every two or three years I have rotated in cowpeas or crimson clover, using potash in the form of sulphate of potash and acid phosphate on the berry crop, and my land grows better and better.

O. W. BLACKNALL.

Vance Co., N. C.